

REMARKS

Prior to the above Amendments, claims 11-20 were pending. With this Response, claims 11-20 have been amended. Thus, claims 11-20 are now at issue.

35 U.S.C. § 102 Rejection of Claim 11

In this Office Action, the Examiner rejected claim 11 under 35 U.S.C. § 102 based on WO 2001094702. In response, Applicant has amended the claims. Specifically, claim 11, as originally presented, has been amended, at least in part, to combine the features of claim 16 with the features of claim 11 in order to better distinguish over the cited references, as follows:

(1) the system consists of a double-layer road structure, one layer of said double-layer road structure is a motor way on the ground and another layer is a footway at a suitable elevation over said motor way, said footway is corresponding to the motor way, or said footways with proper width are located at each side above the two sides of said motor way and the two side footways are connected across with a passageway, or the two kinds of roads are both provided in urban road system respectively,

(2) a first floor layer of buildings on the ground and beside the two side of road are a aerial layer that are used for parking area.

First, one of the distinguishing features between the present application and Lee is that the system in the present application has one and only one layer for the motor way on the ground, while Lee provides automobile roads vertically laid one above another. The multi-layer road system in Lee comprising: multilevel roads comprised of at least two automobile floors between which an interfloor road is formed, respectively for securing parking spaces and living spaces (referring to claim 1, line 27-30 page 6 and Fig. 1, 2, 6 and 7 in Lee). In addition, the structure with three layers, at least including an interfloor, is disclosed in Lee, which is

significantly different from the present application. The present application provides a double-layer structure with one and only one layer for motor way on the ground and one layer for the footway over the motor way at a suitable elevation. (See Figs. 2, 4, and 5, and corresponding description in the present application). The double-layer structure of the present application “consists of” a motor way and a footway, but not double motor ways, which is significantly different from and a distinguishing technical feature as compared to Lee. The technical scheme that only one motor way is applied to solve the traffic problem is not anticipated by the complicated multi-layer structure with at least two automobile roads in Lee; the technical scheme in the present application is not obvious, and there is no motivation to the ordinary skilled person in this art could to arrive at the traffic system of the present application, based on Lee. Consequently, the integral structures between the present invention and Lee are patentably distinct.

Furthermore, another distinguishing feature between the present application and Lee is that automobiles are driven on the motor way on the ground in the present application. However, Lee discloses elevated multi-layer roads for automobiles whose structure is considered unsuccessful. As is known, the demolished elevated multi-layer roads for automobiles in Boston severed the whole city and destroyed the normal functions of the city, which is strong evidence that significant damage is created elevated multi-layer roads for automobiles. This shows that the technical scheme of Lee is a failure and also shows that the technical scheme consisting of a unique motor way on the ground in the present application. The technical scheme of the present application applies the first floor of the buildings beside the roads to completely solve parking problems, which clearly distinguishes Lee and provides a significant advancement over Lee.

Further, significant multi-layer structure is disclosed by Lee, with one floor corresponding to another with the same width (See the Figs. of Lee). In the present application, the footway only partially corresponds to the motor way in the technical scheme of amended claim 11, with the footways being at a suitable elevation and located on both sides of the motor way. In addition, the footways have suitable width with cross roads between for connection of the footways. That is to say, the motor way and footway are not separated in Lee, and therefore, roads with the same width must be provided to ensure the traffic capacity on every floor for both motor vehicles and non-motor vehicles in Lee. Importantly, in the present invention, the motor ways and the first floor of the buildings beside the motor ways are on the same layer (See Fig. 2 and corresponding description). Consequently, the aerial floor is applied in said buildings beside the motor ways to integrate the first floor of the buildings beside the motor ways and the motorways to greatly enlarge the space for driving and parking. It also provides a “plane” area for driving and parking instead of a “line” road; on the contrary, there is a multi-layer structure in Lee whose first floor is elevated from the ground (see lines 14-18, page 16, and Figs 1, 20, 21 along with the corresponding description), in which automobiles are limited to driving in “line” roads. Buildings beside the roads are not even mentioned in Lee. Thus, the technical feature of an aerial floor is not disclosed by Lee, and one of ordinary skill would not be motivated by Lee to provide this feature either.

In any event, the structure of the urban road system of the present application is simple and compact, which is more easy to construct and at a lower cost than the system in Lee, yet, the present invention still perfectly solves the traffic problems and provides sufficient parking spaces. Thus, amended claim 10 brings outstanding beneficial effect over Lee, and is novel and non-obvious in view of Lee.

35 U.S.C. § 102 Rejection of Claims 12-20

All the amended claims refer directly or indirectly to claim 11, and necessarily include all the elements of claim 11. Consequently, based on the above-discussed remarks, all the remaining dependent claims are novel and non-obvious.

Detailed technical effect of the present application

1. The technical scheme of the present application provides at least three substantial changes to the city, which are not disclosed in the cited references.

(a) Not only are traffic jams avoided, but parking problems are also completely resolved in this present application because of the huge number of parking spaces that are provided. Meanwhile, the urban section is very compact and saves lots of fields.

(b) Trip distance is very short in the city because of the compact structure, mostly by means of walking or the non-motor vehicles to increase the sharing rate of the traffic and decrease the pressure on the motor way. Meanwhile, it also saves oil consumption and exhaust emission.

(c) Roads and parking spaces are located on the ground only for cars; whereas, people take activities on the upper layer. This structure realizes the separation between cars and people without any trouble to the people. Meanwhile, it also greatly improves the traffic security without any traffic accidents.

2. The condition to meet the requirement for solving the traffic jams and parking problems.

(a) The reason leading to traffic jams is that the traffic capacity of the road in a certain area can't meet the actual traffic requirement in the same area. So, if traffic capacity and actual traffic requirements on one square kilometer could be named traffic-supply-density and traffic-

demand-density which is respectively shortened as TSD and TDD, the reason for traffic jam could be simply expressed as: $TSD < TDD$.

(b) To make sure the unblocked traffic system must meet the requirement of: $TSD > TDD$.

(c) The reason leading to hard parking situation is that the number of parking space is less than the holding quantity in a certain area. The two elements are respectively called parking-supply-density and parking-demand-density shortened as PSD and PDD. Thus, the above reason would be simply expressed as: $PSD < PDD$.

(d) To solve this problem, the PSD must be 20% percent higher than PDD. The above principles have been completely deduced by the Applicant.

(e) According to the statistical data of 52 countries provided by World Bank, the car-holding saturation point is 600 cars in every thousand persons, supporting there are 10000 in every square kilometer, then the number of parking space should be about 7200; consequently, 14400 parking spaces are required corresponding to 20000 persons in every square kilometer.

(f) Some data shows average distance drive per day in most European countries is 60 kilometers, and traffic peak period will take up approximately 11% of the whole day. Based on the situation of car-holding saturation point, $TDD = 6000 * 11\% * 60 = 40000$ car•kilometer/hour is required in a city with 10000 persons in every square kilometer. The non-uniform coefficient (about 1.25) must be considered, and TDD is actually more than 50000 car•kilometer/hour.

(g) In this present invention, when the motor roads occupy more than 20% of the area of the city, TDD would be more than 80000 car•kilometer/hour > 50000 car•kilometer/hour. That is to say: $TSD > TDD$.

(h) The whole traffic system will never be blocked. When parking spaces take up 40% of the city area, more than 10000 or 20000 would be provided when the first floor or the lowest two floors are built for parking. Then, $PSD > PDD$. The parking problem would therefore be avoided.

3. Consequently, the present application is novel and not obvious and the technical effect is significant in view of the prior art.

CONCLUSION

Therefore, the present invention is novel and is non-obvious. Applicant requests entry of the present amendments and examination of the pending claims in view thereof. Commissioner is authorized to charge any fee deficiency, or credit any overpayments, to Deposit Account No. 502261. The Examiner is invited to contact the undersigned if the Examiner believes a telephone conference would expedite allowance of the present claims and application.

Respectfully submitted,

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